

B.0661<sup>Rlex</sup>

## CLAIMS

1. Weight sensor with strain gauges deposited in a thick film  
5 on a support (2) of an electrically insulating material  
intended to be applied to a metal body (2) deformable  
primarily in flexure, characterized in that said support (2)  
is of a ceramic material having a Young's modulus  $E_2$  equal to  
or lower than that  $E_1$  of the deformable metal body (1) and that  
10 it is applied by adhering to the latter.
2. Weight sensor according to claim 1, characterized in that  
said body (1) presents a rectangular cross section having a  
thickness less than or equal to 15 mm.
3. Weight sensor according to one of the claims 1 or 2,  
15 characterized in that said body (1) is made of steel.
4. Weight sensor according to one of the preceding claims,  
characterized in that said support (2) is selected from the  
group comprising a zirconia or yttria or cordierite or  
steatite ceramic.
- 20 5. Weight sensor according to one of claims 1 to 3,  
characterized in that said support (2) is made of a ceramic  
cofired at low temperature.
6. Weight sensor according to one of the preceding claims,  
characterized in that the thickness of said support (2) is  
25 comprised between 0.05 and 0.5 mm.
7. Weight sensor according to one of the preceding claims,  
characterized in that it comprises a test body (1) in the

shape of a bar carrying the strain gauges (6), one of the ends of said bar being connected to a fastener (3), the other end being connected to a load applying element (4), where the test body (1) flexes according to an S shaped form as a symmetrical double cantilever.

8. Weight sensor according to claim 7, characterized in that it is produced in the form of a metal plate having a fastener (3) in the shape of a framework (3a) or U, connected in the middle of its base to a first end of a test body (1) extending at the interior of the fastener (3), the opposite end of the test body (1) being connected to a load receiving element (4) in the form of a U, extending in a symmetrical manner relative to the body (1), with the arms (4a,4b) parallel to the body (1) and directed towards said first end of the body (1).

9. Electronic weighing appliance having at least one sensor according to one of the preceding claims.